

**What is claimed is:**

1. A method of delivering a ligand to a cell comprising:
  - a. contacting a cell with a ligand and a fluorophore; and
  - b. illuminating the cell with a light that activates the fluorophore such that  
5 the ligand is delivered to the cell.
2. The method of claim 1, wherein the ligand is an oligonucleotide.
3. The method of claim 1, wherein the ligand is peptide.  
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4. The method of claim 1, wherein ligand is a fluorescent virus.
5. The method of claim 1, wherein the ligand is a morpholino oligonucleotide.
- 15 6. The method of claim 1, wherein the ligand is a sense oligonucleotide.
7. The method of claim 1, wherein the ligand is an antisense oligonucleotide.
8. The method of claim 1, wherein the ligand enters an endosome of the cell during  
20 step (a).
9. The method of claim 8, wherein the illuminating of step (b) causes the endosome containing the ligand to release the ligand.
- 25 10. The method of claim 1, wherein the light has a wavelength of about 10 to about 380 nm.

11. The method of claim 1, wherein the light has a wavelength of about 380 to about 500 nm.
12. The method of claim 1, wherein the cells are illuminated for less than about 2  
5 minutes.
13. The method of claim 1, wherein the cells are illuminated for less than about 1 minute.
- 10 14. The method of claim 1, wherein the light of step (b) is produced from a flexible endoscopic light source.
- 15 15. The method of claim 1, wherein the fluorophore and the ligand are linked via a covalent linkage.
16. The method of claim 1, wherein the fluorophore is a fluorescein fluorophore.
17. The method of claim 1, wherein the fluorophore and the ligand contacted with the cell simultaneously.
- 20 18. A method of delivering ligands to a cell comprising:
- a. exposing a cell to a medium containing ligands and fluorophores wherein the ligands and fluorophores are not covalently linked; and
  - b. illuminating the cell with a light that activates the fluorophores such that  
25 the ligands are delivered to a cell.

19. A method of releasing ligands from endosomes in cells present at a localized site in a subject comprising illuminating the cells at a localized site in the subject with a light such that the ligands are released at a localized site in the subject.

5 20. The method of claim 19, wherein the ligands are fluorescent oligonucleotides.

21. The method of claim 19, wherein the ligands are fluorescent peptides.

22. The method of claim 19, wherein the ligands are fluorescent viruses.

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23. The method of claim 19, wherein the ligands are fluorescent morpholino oligonucleotides.

24. The method of claim 20, wherein the fluorescent oligonucleotides are present in  
15 step (a) at a concentration of over 300  $\mu$ M.

25. The method of claim 20, wherein the fluorescent oligonucleotides are present in step (a) at a concentration of over 500  $\mu$ M.

20 26. The method of claim 19, wherein the light has a wavelength that is about 10 to about 380 nm.

27. The method of claim 19, wherein the light has a wavelength that is about 380 to about 500 nm.

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28. The method of claim 19, wherein the cells are illuminated for less than 2 minutes.

29. The method of claim 19, wherein the cells are illuminated for less than 1 minute.
30. The method of claim 19, wherein the light is produced from a flexible  
5 endoscopic light source.
31. The method of claim 19, wherein the ligands are covalently linked to a fluorescein fluorophore.
- 10 32. The method of claim 19, wherein the localized site is inside the mouth of the subject.
33. The method of claim 17, wherein the localized site is inside the colon of the subject.
- 15 34. The method of claim 17, wherein the localized site is on the skin of the subject.
35. The method of claim 17, wherein the localized site is a tumor.
- 20 36. A method of modulating protein production at a localized site in a subject comprising:  
a. exposing a group of cells of the subject to a ligand and a fluorophore; and  
b. illuminating the cells at a localized site in the subject with light that  
activates the fluorophore  
25 such that protein production at a localized site in the subject is modulated.
37. The method of claim 36, wherein protein production is enhanced.

38. The method of claim 37, wherein protein production is inhibited.

39. A method of modulating protein activity at a localized site in a subject

5 comprising:

- a. exposing a group of cells of the subject to a ligand and a fluorophore; and
- b. illuminating the cells at a localized site in the subject with light such that the fluorophore is activated and protein activity at a localized site in a subject is modulated.

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40. The method of claim 39, wherein protein activity is enhanced.

41. The method of claim 39, wherein protein activity is inhibited.

15 42. A method of treating a disorder that would benefit from enhanced availability of a ligand in a cell comprising:

- a. exposing a group of cells of the subject ligand and a fluorophore; and
- b. illuminating the cells with light that activates fluorophore, thereby enhancing the availability of the ligand and treating a disorder that would benefit from enhanced availability of the ligand.

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